

ABSTRACT

This invention provides a local dry etching method comprising the step of removing an oxide film formed on the surface of a semiconductor wafer before unevenness on the semiconductor wafer is removed by scanning the surface of the semiconductor wafer at a controlled relative speed with a nozzle for applying a flow of activated species gas to the surface of the semiconductor wafer. The removal of this oxide film is carried out by widening an etching profile and a scan pitch and making the nozzle speed constant, and then flattening is carried out in the same local dry etching apparatus. For flattening, the nozzle speed is changed for each area according to initial unevenness.